Polarographic Catalytic Hydrogen Waves Caused by Organic Catalysts. I. Exact Solution of the Problem for the Case of a Bimolecular Regeneration of the Inactive Form of the Depolarizer From the Products of Electrode Reaction, and of a Monomolecular Conversion of the Depolarizer to Its Active Form

\$/076/60/034/03/025/038 B005/B016

 $(\mathbf{t_s} \ll \mathbf{t_1})$, in which the concentrations of the substances A and B are equal to the initial concentrations owing to the assumed rapid regeneration of the depolarizer from the products of depolarization. It follows that the diffusion of the depolarizer from the solution to the electrode does not affect the electrode process, and that current density does not depend on time, accordingly. This means for a dropping electrode that the mean current density is independent of the depth of the reservoir and is, at the same time, proportional to t2/3. On the basis of these assumptions the authors derived the equations for the mean polarographic current densities by means of an exact method. The derivation is given and explained in detail. There are 2 figures and 8 references, 1 of which is Soviet.

ASSOCIATION:

Chekhoslovatskaya Akademiya nauk Institut fizicheskoy khimii (Czechoslovakian Academy of Sciences, Institute of Physical Chemistry). Akademiya nauk SSSR Institut organicheskoy khimii im. N. D. Zelinskogo (Academy of Sciences, USSR, Institute of Organic Chemistry imeni N. D. Zelinskiy)

February 10, 1959

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Z/009/61/000/007/003/004 E112/E135

AUTHORS:

Dolejšek, Z., Grubner, O., Hala, E., Hanus, V., and

TITLE:

Contribution to the purification and analysis of

isoprene. II.

PERIODICAL: Chemicky průmys1, 1961, No.7, pp. 361-363

TEXT: The production of polyisoprene requires the use of a monomer of highest purity. Distillation methods are suggested for the isolation of isoprene; it is stated that recovery processes will be successful if based on a thorough knowledge of vaporliquid equilibrium data of the main components of technical isoprene. The present paper describes the determination of equilibrium data for mixtures of 2-methylbutene-1 (component 1), isoprene (component 2) and 2-methylbutene-2 (component 3). The above components were first purified and their mixtures then studied in a modified vapor-liquid equilibrium still, developed originally by D.T.C. Gillespie (Ref. 2: Ind. Eng. Chem. A.E., 18, 575 (1946). A diagram of the apparatus is shown in Fig. 1 and the experimental procedure is described. (A - inlet tube, C - Cottrell pump, Card 1/6

Contribution to the purification and analysis of isoprene. II.

 $z=t-t-(-1)(1+t)\cos du = 0.05du + 0.05du$

E - equilibrium chamber, CH - condenser, K, P - sample chambers, R - disengagement chamber, V - boiler). In operation, sample chambers K, P and boiler V are filled with a measured quantity of the hydrocarbon mixture and the boiling rate adjusted so as to maintain the steady pumping of liquid and vapour through the Cottrell tube. After allowing sufficient time of operation to ensure steady conditions within the apparatus, samples of the boiling liquid and condensed vapour are withdrawn from chambers K and P by means of a cooled syringe and collected in glass ampoules for analysis. Analytical data are tabulated which enable the calculation of the correlation between relative volatility and composition of the liquid phase. The equation for a binary system is as follows:

$$\mathbf{a}_{12} = \frac{\mathbf{y}_1}{\mathbf{x}_1} \frac{\mathbf{x}_2}{\mathbf{y}_2} = \frac{1 + 0.102 \ \mathbf{x}_2}{1 - 0.093 \ \mathbf{x}_1} \tag{1}$$

$$\mathbf{a}_{13} = \frac{\mathbf{y}_1}{\mathbf{x}_1} \frac{\mathbf{x}_3}{\mathbf{y}_3} = \frac{1 + 0.410 \times_3}{1 - 0.291 \times_1} \tag{2}$$

Card 2/6

Contribution to the purification and analysis of isoprene. II

$$\mathbf{a}_{23} = \frac{\mathbf{y}_2}{\mathbf{x}_2} \frac{\mathbf{x}_3}{\mathbf{y}_3} = \frac{1 + 0.180 \ \mathbf{x}_3}{1 - 0.083 \ \mathbf{x}_2} \tag{3}$$

where: x_1 , x_2 , x_3 are molar fractions of components 1, 2 and 3 in the liquid phase; y_1 , y_2 , y_3 are molar fractions of components 1, 2 and 3 in the vapour phase; and a_{12} , a_{13} , a_{23} the relative volatilities of the subscript components. Ternary systems follow the following equations:

$$\mathbf{a}_{13} = \frac{\mathbf{y}_1}{\mathbf{x}_1} \frac{\mathbf{x}_3}{\mathbf{y}_3} = \frac{1 + 0.410 \ \mathbf{x}_3 + 0.102 \ \mathbf{x}_2}{1 - 0.291 \ \mathbf{x}_1 - 0.083 \ \mathbf{x}_2}$$
(4)

$$\mathbf{x}_{23} = \frac{\mathbf{y}_2}{\mathbf{x}_2} \frac{\mathbf{x}_3}{\mathbf{y}_3} = \frac{1 + 0.180 \ \mathbf{x}_3 - 0.093 \ \mathbf{x}_1}{1 - 0.083 \ \mathbf{x}_2 - 0.291 \ \mathbf{x}_1}$$
 (5)

The composition of the gaseous phase in equilibrium can be computed from the composition of the liquid phase by equations:

Card 3/ 6

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Contribution to the purification and analysis of isoprene. II.

$$y_1 = \frac{a_{13} \frac{x_1}{x_3}}{1 + a_{13} \frac{x_1}{x_3} + a_{23} \frac{x_2}{x_3}}$$
 (6)

$$y_2 = \frac{a_{13} (x_2 / x_3)}{1 + a_{13} \frac{x_1}{x_3} + a_{23} \frac{x_2}{x_3}}$$
 (7)

$$y_3 = 1 - y_1 - y_2$$
 (8)

The authors conclude from Eqs. (1) to (5) that binary or ternary azeotropes are absent from the system isoprene; 2-methylbutene-1 and 2-methylbutene-2, although this is in disagreement with the finding of M. Lecat (Ref.7: Ann. Soc. Sci. Bruxelles, 63, 58 (1949). The validity of the findings of the Czechoslovak authors was confirmed by practical distillation results, which will be utilized Card 4/6

Contribution to the purification and analysis of isoprene. for the study of the economics of industrial isoprene recovery for the production of synthetic rubber. There are 1 figure (diagram of Gillespie apparatus), 2 tables (results of analyses) and 9 references: 6.Czech, 2 English and The English language references read as follows: Ref. 2: D.T.C. Gillespie, Ind. Eng. Chem. A.E., 18, 575 (1946). Ref. 8: L.H. Horsley, Azeotropic data. Washington, 1954, No. 7837.

ASSOCIATION: Ústav fyzikální chemie Československé akademie věd, Praha

(Institute of Physical Chemistry, Czechoslovak AS,

Prague)

SUBMITTED: November 14, 1960

Card 5/6

MOZA, B.K.; TROJANEK, J.; HANUS, V.; DOLEJS, L.

On alkaloids. Pt. 13. Coll Cz chem 29 no.8:1913-1921 Ag '64.

1. Research Institute for Natural Drugs, Prague, Institute of Physical Chemistry, and Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague.

TROJANEK, J.; STROUF, O.; BLAHA, K.; DOLLJS, L.; HANUS, V.

On alkaloids. Pt. 12. Coll Cz chem 29 no.8:1904-1912 Ag '64.

1. Research Institute for Natural Drugs, Prague, Institute of Organic Chemistry and Biochemistry, and Institute of Physical Chemistry, Czechoslovak Academy of Sciences, Prague.

DOLEJS, L.; HANGS, V.; SLAVIK, J.

A mass spectrometric study of protopine alkaloids. Coll Cz Chem 29 no.10:2479-2483 0 '64.

i. Institute of Organic Chemistry and Biochemistry. Institute of Physical Chemistry, Czechoslovak Academy of Sciences, Prague, and Department of Chemistry, Faculty of Medicine, rurkyne University, Brno.

CERMAK, V.; HANUS, V.; HLADEK, L.; HERMAN, Z.; PACAK, M.; SCHULZ, L.

A mass spectrometer for precise determination of the ratio of deuterium to hydrogen in hydrogen gas in the region of natural deuterium concentrations. Coll Cz Chem 27 no.7:1633-1638 J1 '62.

1. Institute of Physical chemistry, Czechoslovak Academy of Sciences, Prague.

CZECHOSLOVAKIA

DOLEJS, L; HANUS, V; CERMY, V; SORM, F.

1. Institute of Organic Chemistry and Biochemistry; 2.
Institute of Physical Chemistry of the Czechoslovak
Academy of Sicences, Prague (for all)

Prague, Collection of Czechoslovak Chemical Communications,
No 5, 1963, pp 1584-1591

"On Steroids. LXXVIII. Mass Spectra of Holarrhena Alkaloids."

DUSKOVA, L.; GRUBNER, O.; HANUS, V.; KOSSLER, I.; MATYSKA, B.

Selection of extraction agents for isoprene rectification. Chem prum 13 no.10:513-516 0 '63.

1. Ustav fyzikalni chemie, Ceskoslovenska akademie ved, Praha.

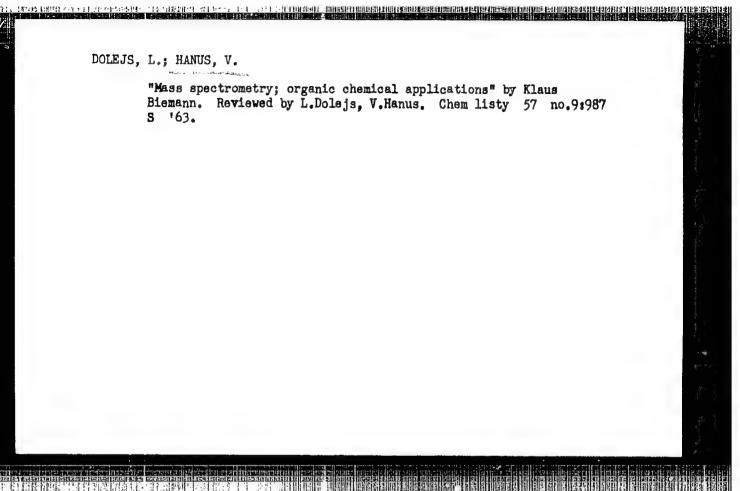
HANUS, V., promovany ekonom

Main trends in the improvement of work organization in industrial enterprises. Pod org 17 no. 12: 565 D *63.

HANUS, V.; DOLEJSEK, Z.

Some experimental data related to theories of mass spectra origin. Coll Ca Chem 28 no.3:652-658 Mr *63.

1. Institute of Physical Chemistry, Czechoslovak Academy of Sciences, Prague.



HANUS, Vaclav

Zonal structures of products of hydrothermal metasomatism.
Rozpravy mat. CSAV. 73 no.1:3-52 *63.

1. Central Geological Survey, Praha.

GANUSH; V. [Hanus, V.]; MAYRANOVSKIY, S.G.; EOUTETSKIY, Ya. [Eoutecky, J.]

Polarographic catalytic hydrogen waves produced by organic catalysts. Part 2. Zhur. fiz. khim. 36 no.9:2010-2107 5 '62.

(MJRA 1716)

1. Akademiya nauk Chokhoslovakii, Institut fizicheskoy khimii AN SSSR i Institut organicheskoy khimii imeni N.D. Zelinskogo.

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DOLEJS, L.; HANUS, V.; CERNY, V.; SORM, F.

On steroids. Pt. 78. Coll Cz Chem 28 no.6:1584-1592 Je 163.

1. Institute of Organic Chemistry and Biochemisty and Institute of Physical Chemistry, Czechoslovak Academy of Sciences, Prague.

[2017] [

SANTAVY, F.; KAUL, J.L.; HRUBAN, L.; DOLEJS, L.; HANUS, V.; BLAHA, K.

Constitution of rhoeadine and isorhoeadine. Coll uz unem 30 no.1:335-338 Ja '65.

1. Chemical Institute of the Medical Faculty of Palacky University, Olomouc (for Santavy, Kaul and Hruban). 2. Institute of Organic Chemistry and Biochemistry of the Czechoslovak Academy of Sciences, Prague (for Dolejs and Blaha). 3. Institute of Physical Chemistry of the Czechoslovak Academy of Sciences, Prague (for Hanus). Submitted July 22, 1964.

CZECHOBLOVAKIA

VOTICKY, Z.; TOMKO, J.; DOLEJS, L.; HANUS, V.

1. Chemical Institute, Slovak Academy of Sciences, Department of Alkaloids, Bratislava - (for Voticky and Torko), 2. Institute of Organic Chemistry and Biochemistry, Ozechoslovak Academy of Sciences, Prague, (for Dolojs); 3. Institute of Physical Chemistry, Ozechoslovak Academy of Sciences, Prague (for Hanus).

Prague, Collection of Czechoslovak Chemical Communications, pp 3705-3710.

"Alkaloids from Buxus sempervirens L. Part 4: The structure of buxtauine."

CZECHOSLOVAK IA

DOLEJSEK, Z.; HALA, S.; HANUS, V.; LANDA, S.

1. Institute of Physical Chemistry, Csechoslovak Academy of Sciences (for Dolejsek and ?); 2. Laboratory of Synthetic Fuel and Oil, Prague (for Landa? and ?)

Prague, Collection of Czechoslovak Chemical Communications, No 2; Peb 1966, pp 435-449

"Adamantane and its derivatives. Part 8: Hass spectra of derivatives of adamantane formed by substitution at $C_{(1)}$."

CZEJII SŁOVALIA

BLAHA, H; BROSS, A.D.

1. Chemical Institute of the Medical Faculty of Palacky
University, Olomouc (for Santavy, Kaul, Mruban); 2.
Institute of Organic Chemistry and Biochemistry, Prague
(for Dolejs, Blaha); 3. Institute of Physical Chemistry
of the Szechoslovak Academy of Sciences, Frague (for
Hanus); 4. Syntex Research Center, Palo Alto, California,
U.S.A. (for Cross)

and the sale with the state of the state of

Prague, Collection of Czechoslovak hemical Communications, No 10, 1965, pp 3479-3499

"Constitution of Rhoeadine and Isorhoeadine."

GANISH, V. [Hanus, V.]; DOLEYSH, L. [Dolejs, L.]; SHUL'TS, L.

Filling system for measuring the mass spectra of nonvolatile organic compounds. Prib. i tekh. eksp. 9 no.1:215-217 Ja-F '64.

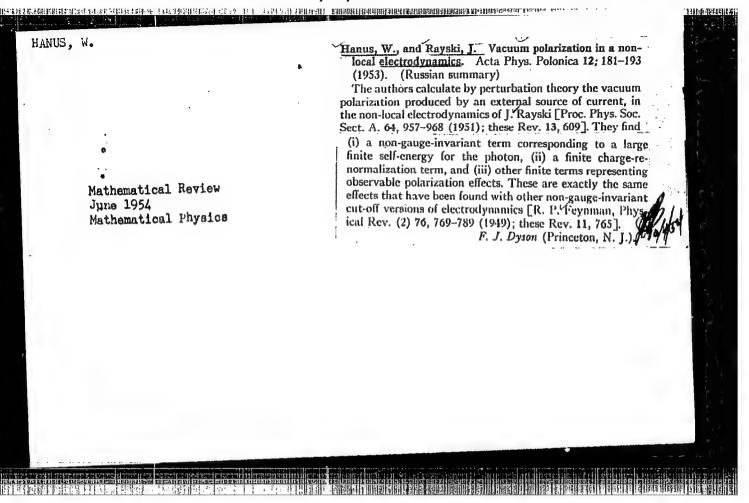
1. Institut fizicheskoy khimii i Institut organicheskoy khimii i biokhimii Akademii nauk Chekhoslovatskoy Sotsialisticheskoy Respubliki, Praga.

CHREOLKA, Jaroslav; HANIS, Vaclav

Advantages and shortcomings of flow production. Podn org
18 no. 3:106-111 Mr '64.

1. Institute of State Economic and Organizational Research
Institute of the Consumer Goods Industry (for Chrbolka).

2. Higher School of Economics, Prague (for Haunus).

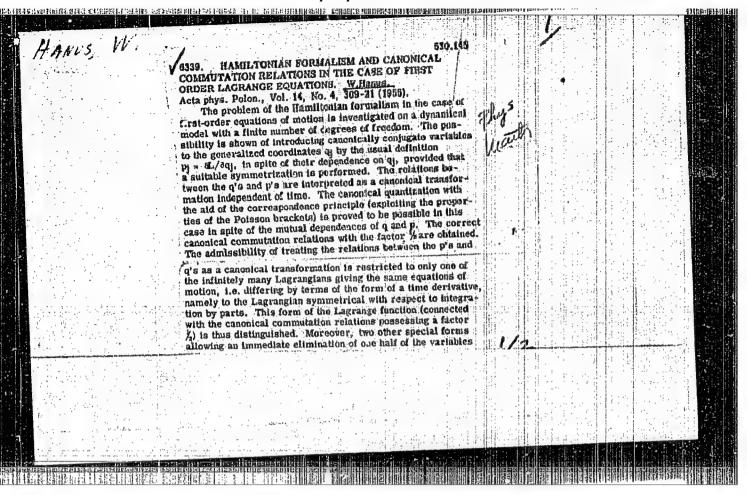


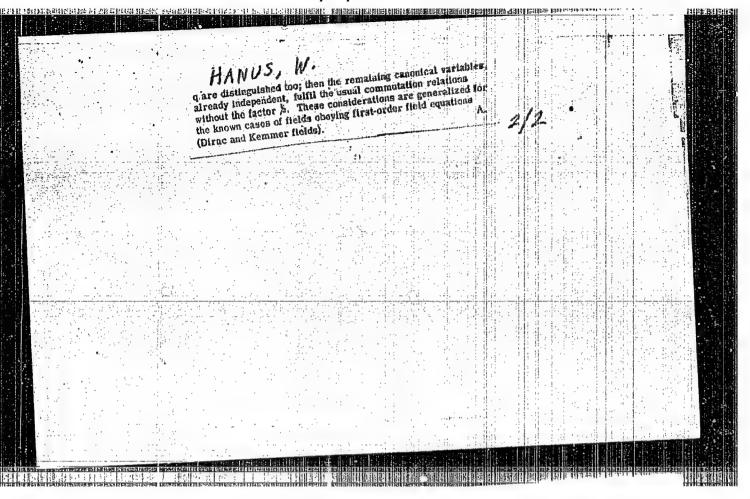
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HANUS, W.

On the -formalism of Kemmer and its quantization on the basis of Schwinger's variational principle. In English. p. 275, (ACTA PHYSICA POLONICA, Vol. 13, No. 4, 1954, Warsazawa, Poland)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 5, May 1955, Uncl.





CIA-RDP86-00513R000617910004-3 "APPROVED FOR RELEASE: 09/19/2001

B-6

Hanus, W

POLAND/Theoretical Physics

: Referat Zhur - Fizika, No 5, 1957, No 10921 Abs Jour

Hanus, W., Rayski, J. Author

Inst On the Mass Spectra for Bosons

Title : Acta phys. polon., 1956, 15, No 2, 117-122

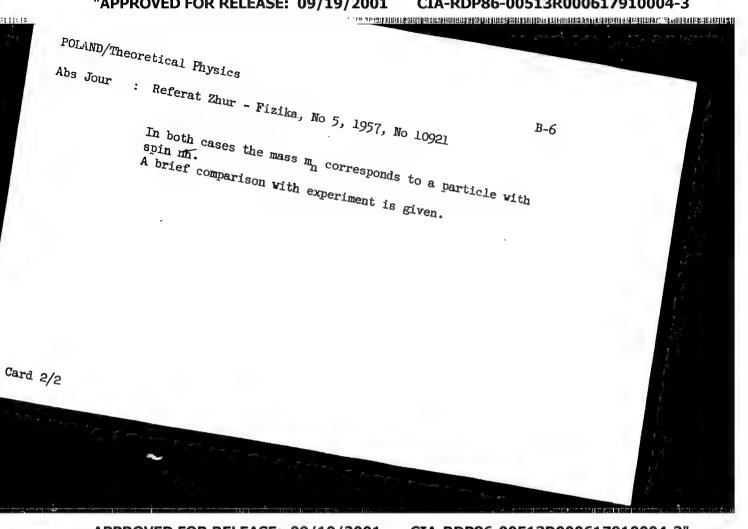
Orig Pub

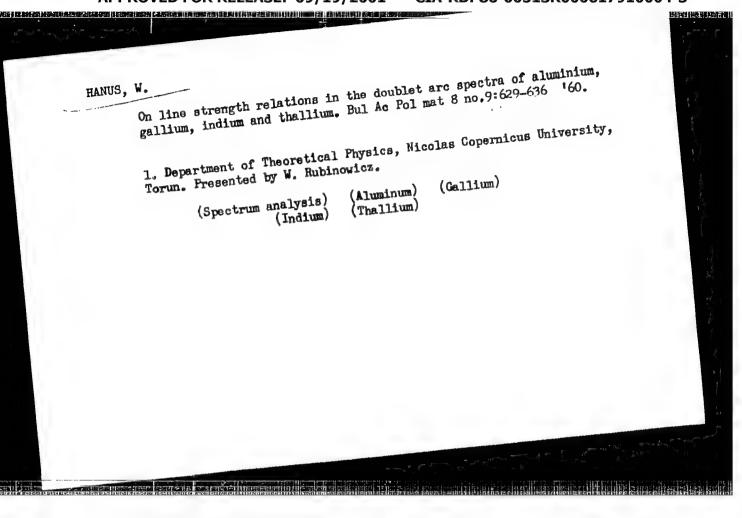
A study is made of the mass spectrum in the bilocal theory. For this purpose, the square of the mass m2 is replaced in Abstract

the bilocal equations of motion by the mass operator M2. Introducing the mass operator should not disturb the compatibility of the equations of motion. This requirement leads to the condition for the determination of the mass spectrum: $M^2 V = m^2 V$. Two possible choices of the operator M^2 are considered. It is proposed, that in one

case the mass spectrum obtained corresponds to the family of π mesons, and in the second to the family of K mesons.

Card 1/2





HANUS, Wanda

On some problems of relative intensities in atomic spectra. Postepy fizyki no.3:275-287 '60.

1. Katedra Fizyki Teoretycznej, Uniwersy et Mikolaja Kopernika,

S/058/62/000/003/038/092 A061/A101

AUTHOR:

Hanus, W.

TITLE:

Relative doublet-line intensity in the principal series of cesium

PERIODICAL:

Referativnyy zhurnal, Fizika, no. 3, 1962, 2, abstract 3V11 ("Bull. Acad. polon. sci. Sér. sci. math. astron. et phys.", 1961,

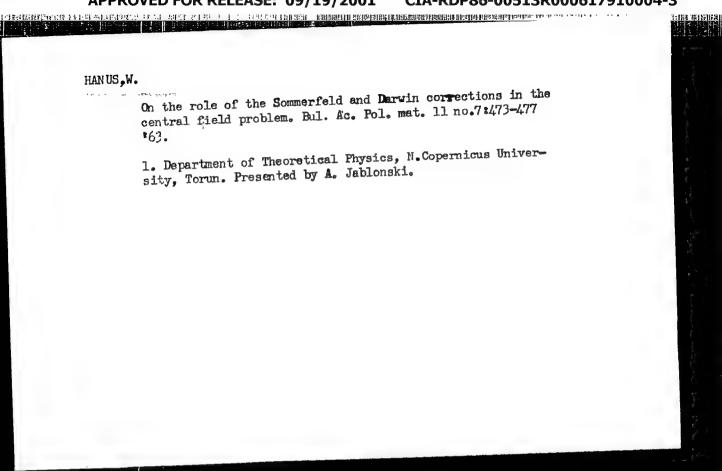
v. 9, no. 4, 287 - 291, English; Russian summary)

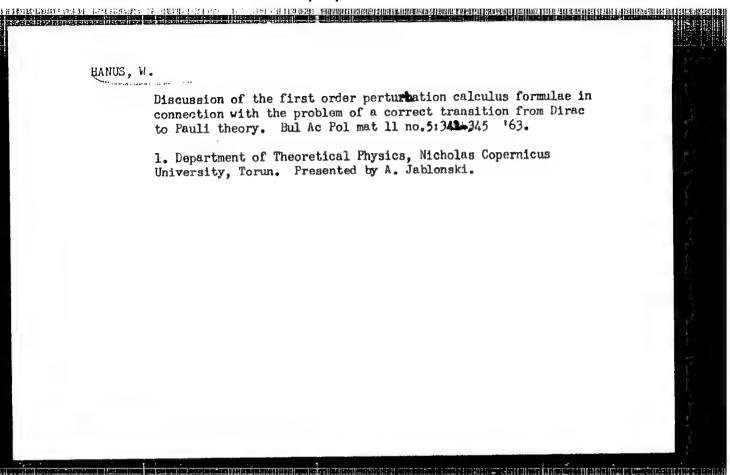
TEXT: Using data available on oscillator strengths (f_n) and the Fermi formula, the relative doublet-line intensity $(S_2/S_1)_n$ was calculated for 13 lines of the principal series of cesium. The calculated $(S_2/S_1)_n$ values were compared with experimental data. The possible effect of errors in f_n on $(S_2/S_1)_n$ was evaluated. It is pointed out that the theoretical results seem to back Kratts's assumption that $(S_2/S_1)_n$ approaches a fairly high asymptotic value in the farthest lines of the series.

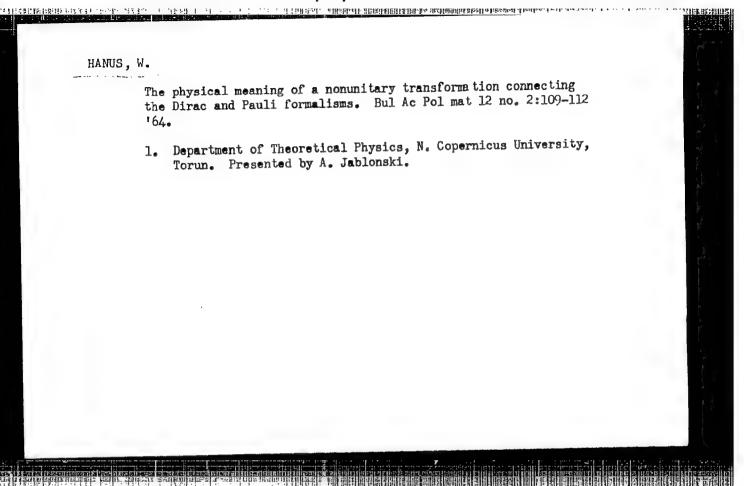
Ye. Pshenichnov

[Abstracter's note: Complete translation]

Card 1/1







HANUS, Wanda

"Post-Pauli approximation" and its statistical interpretation.
Acta physica Pol 26 no.6;1181-1195 '64.

1. Department of Theoretical Physics of Nicholas Copernious University, Torun. Submitted June 13, 1964.

्र ११ मित्र त - स्वादेशकाति होशीद्राप्त्रवाह्नकालक्षकालकाचे बाद्रातावालकाच्याचाव वास्त्रवास वास्त्रवास । स्वतं

HANUS, W.

Influence of exchange and polarizability effects on relative line strengths in atomic spectra. Bul Ac Pol math 13 no.1: 73-75 '65.

1. Department of Theoretical Physics of N.Copernicus University Torun. Submitted November 9, 1964.

HANUS

CZECHOSLOVAKIA / Physical Chemistry, Thermodynamics. Thermochemistry. Equilibria. Physico-Chemical Analysis, Phase Transitions.

Abs Jour: Zhur-Khimiya, No 17, 1958, 56662.

: Tomiska Josef, Hanus Zdenek. Author

: Not given. Inst

: Calculation of Normal Boiling Points, Vapor Title

Pressures and Critical Values of ionochloro-

paraffines.

* Crig Pub: Chem. listy., 1957, 51, No 6, 1014 - 1024.

Abstract: The authors have proposed empirical relationships. 1. The differences T2 - T, of normal paraffine boiling points T, $(^{\delta}K)$, their primary monochlorine derivatives T2 $(^{\circ}K)$ for substances with the same number of C atoms are practically identical (deviation < 10. More-

Card 1/4

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To Alic Fores w . C. M. C. Tier of Careneste variety Community Community Tens, 1958, very's, No 2, 2.119-190,

APPROVED FOR RELEASE: 09/19/2001 Thermodynamics 13R000617910004-3 Chemical Analysis, Phase Transitions.

Abs Jour: Ref Zhur-Khimiya, No 17, 1958, 56662.

Partification and solutions declared to the control of the control

Abstract: over, should x be the number of carbon atoms in a molecule, then (at a pressure of 760 millimeters of the mercury column) $T_1 = 139.1 \neq 92.71 \text{ g x} \neq 234 \text{ lg}^2\text{x} - 1.86 \text{ x} (-0.30); T_2 = 120.5 - 67.21 \text{ g x} - 12.61 \text{ lg}^2\text{ x} \neq 0.92 \text{ x} \neq T_1$ - a, whereby a = 0 for primary chloroparaffines, a = 10.6 for secondary and a = 14.3 for tertiary ones. 2. The isomeric monochloride derivatives of a given paraffine of the same type are characterized by approximately the same boiling point (largest deviation 1.60). 3. The boiling points of the secondary chloroparaffines lie approximately 10.60 lower, and the tertiary ones 14.30 lower than the

Card 2/4

Z/009/60/000/012/002/002 E073/E335 Calculation of Some Physical Constants of Monochloroparaffins $T_c = 120.5 - 67.2 \log x - 12.6 \log^2 x + 0.92 x + T_p - \alpha$ where T_p - normal boiling point of the mother praffin - constitution increment for primary monochloroparaffin $\alpha = 10.6$ for secondary monochloroparaffin n = 14.3for tertiary monochloroparaffin The probable error is 0.12 $^{\rm O}\text{C}_{\circ}$ The difference between calculated and measured values did not exceed 1.5 $^{\rm O}\text{C}_{\circ}$ Vapour tension: $T = T_c \left(A \cdot \frac{B}{\log p} \right) \qquad {^{O}K}$ (2) Card 2/6

Z/009/60/000/012/002/002 E073/E335

Calculation of Some Physical Constants of Monochloroparaffins

$$\log p = C - \frac{BT_c}{T - AT_c}$$
 (mm Hg)

where A, B, and C are constants which are tabulated in the paper. For calculating the critical passure the formula of Hougen and Watson (Ref. 1) can be used if the critical pressure of the mother paraffin is known; otherwise, the authors propose a modification of the Meissner relation. The critical volume is also calculated on the basis of the Meissner equation. The heat of evaporation is expressed by a slightly modified version of the Clausius Clapeyron equation. For the density the following formula is proposed;

$$d_4^{20} = 0.906 - 0.023 \log x - 0.016 \log^2 x + \varepsilon$$
 (15)

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Z/009/60/000/012/002/002 E073/E335

Calculation of Some Physical Constants of Monochloroparaffins

where x is the number of carbon atoms in a molecule and ϵ is the constitutional increment which is tabulated

in the paper. It is claimed that the results obtained by means of this formula are considerably more accurate than those obtained by the formulae of Scheibel and Benk8 (Refs. 3, 11). For calculating the density at temperatures other than 20 °C the authors combined the empirical equation derived by E8tv8s, authors combined the empirical equation derived by E8tv8s, Ramsay and Shields (Refs. 9, 12) with the empirical relation of Scheibel and Sugden (Refs. 3, 13). Thus; the following relation is obtained;

$$d_t = k^{0.3}$$
 $M = \frac{\left[t_k - (t + 6)\right]^{0.3}}{\left[P\right]^{1/2}}$ (18)

Card 4/6

2/009/60/000/012/002/002 E073/E335

Calculation of Some Physical Constants of Monochloroparaffins

is the critical temperature, OC and

More accurate results are obtained with the following equations

 $d_t = d_a \left(\frac{t_k - (t + 6)}{t_k - (t_a + 6)} \right)^{0.3}$ (20).

This relation is valid for any nonassociated liquid. If the density d_a for any given temperature t_a is known and also the critical temperature, it is possible to calculate the density for any temperature in the entire temperature range of the liquid state. The refractive index is calculated by means of the Lorenz formula,

Card 5/6

CIA-RDP86-00513R000617910004-3" APPROVED FOR RELEASE: 09/19/2001

z/009/60/000/012/002/002 E073/E335

Calculation of Some Physical Constants of Monochloroparaffins

There are 2 figures, 7 tables and 19 references:

2 Czech and 17 non-Czech, ASSOCIATION:

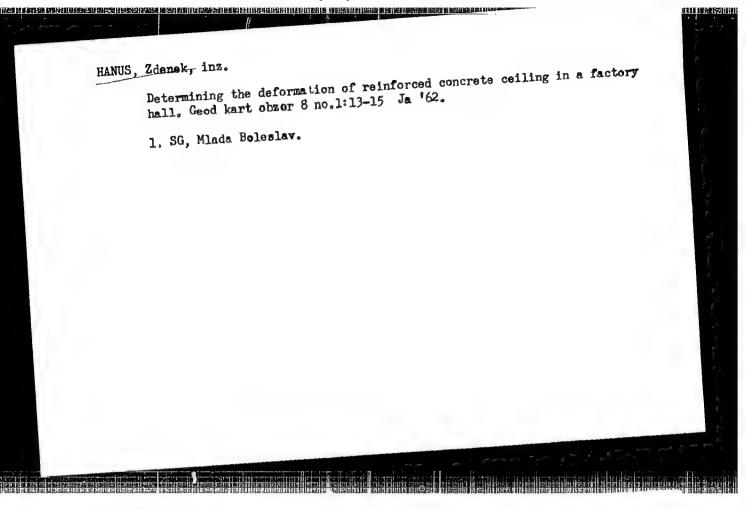
Vojenská akademie A. Zápotockého, Brno (Military Academy A. Zapotocký, Brno)

SUBMITTED:

May 19, 1959

Card 6/6

CIA-RDP86-00513R000617910004-3" APPROVED FOR RELEASE: 09/19/2001



MANUSKA, ALEXANDER

"Kruhove dosky na pruznom polpriestore. Bratislava, Vydavatelstvo Slovenskej

"Kruhove dosky na pruznom polpriestore akademis vied. Ustav stavecnictva a

akademie vied, 1957. 75 p. (Slovenska akademis vied. Ustav stavecnictva a

akademie vied, 1957. 75 p. (Gircular plates on an elastic half-space.

architektury. Prace, zosit 2) / Gircular plates on an elastic half-space.

German and Russian sumraries. blbl., diagrs., footnotes, graphs, tables/"

p. 75 (Bratislava, Czechoslovakia)

Monthly Index of East European Accessions (ESAI) LC, Vol. 7, No. 0, June 1958.

HANUSKA, A.; BALAS, J.

Stress distribution in an infinite wedge. p. 7.

STAVEBNICKY CASOPIS. (Slovenska akademia vied) Bratislava, Czechoslovakia. Vol. 7, no. 1, 1959.

Monthly list of East European Accessions (EEAI) LC, Vol. 8, no. 10, Oct. 1959. Uncl.

HANUSKA, A.

"Beams on an elastic semispace. p. 73"

STAVEBNICKY CASOPIS. (Slovenska akademia vied) Bratislava, Czechoslovakia, Vol. 7, No. 2, 1959

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 6 June 1959 Uncl.

"APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R000617910004-3

R/008/60/000/003/005/007 A125/A026

24.4100 AUTHOR:

Hanuska, Alexander

TITLE:

On the Possibility of Applying Inherent Functions to the Calculation of Skew Quadrangular Plates

不够的多利性性的对象的不多。在工作,Statistic THRESHE STREETH TEERAREHERING 逻辑STREET EASTERNIE EASTERNIE FRANCES

PERIODICAL:

Studii și Cercetări de Mecanică Aplicată, 1960, No. 3, pp. 675-680

Subject article presents one of the possibilities for calculating irregular plates with arbitrary limit conditions. Inherent functions are used for the calculation. The author first examines a plate having a general quadrangular shape and arbitrary limit conditions. He selects the polar coordinates (Fig. 1) and obtains the expressions (1) and (2), in which the relations (3) are valid between the cartesian coordinates. He further considers the function (4) in which the function $w_{1,0}$ satisfies the equation (5), and the limit conditions along the AC and AD sides for i=1, and along the BC and ED sides for i=2. The functions $w_{i,n}$ represent the bi-harmonic function, arranged according to the absolute value of the λ_n root of the transcendental equation. This equation tion corresponds to the conditions of the homogeneous contours for a given support, i.e., for the two triangles having their apex in A and B. The function (4), however, does not satisfy the compatibility condition of the functions w; and w2 in Card 1/2

R/008/60/000/003/005/007 A125/A026

On the Possibility of Applying Inherent Functions to the Calculation of Skew Quadrangular Plates

the CD section. In this section, the conditions (6), (7), (8) and (9) have to be satisfied. For the solution of the four equations (6) - (9), there are four roots of the still undetermined constants alin, alin, alin, alin alin. They can be determined by one of the approximation methods, after substituting the expression (4) in the equations (6), (7), (8) and (9). As an example of application, the author calculates a uniformly loaded plate, simply supported on all fours sides, author calculates a uniformly loaded plate, simply supported on all fours sides, having the shape and dimensions shown in Figure 2, and compares some results with the values indicated by Jensen (Ref. 5). This method can also be used for the solution of plane problems of the clasticity theory. There are 4 figures and 12 references: 5 Soviet, 1 Rumanian, 3 German, 2 English and 1 French.

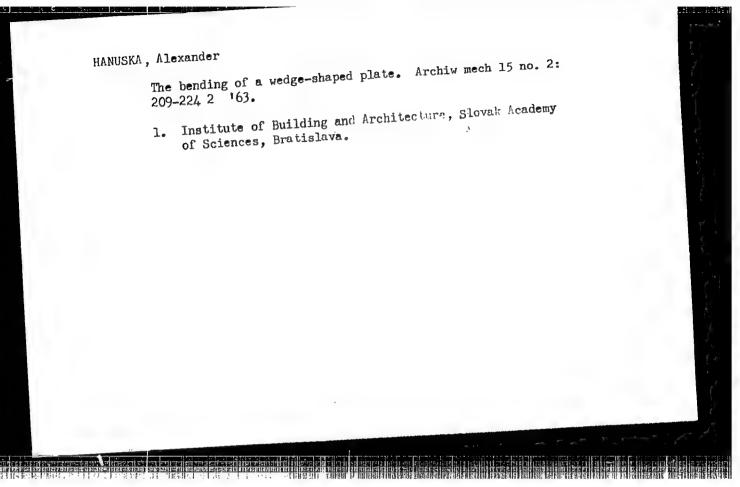
ASSOCIATION: Slovenská Akademiá Vied (Slovak Academy of Science) in Bratislava

SUBMITTED: November 18, 1959

Card 2/2

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000617910004-3"

Vc.



BAIAS, Jan, inz., CSc.; HARWSKA, Alexander, inz., CCc.

Static solution of some types of nonrectangular plates.

Stav cas 12 no.1:64. '64.

HANUSKA, Alexander, inz. CSc.

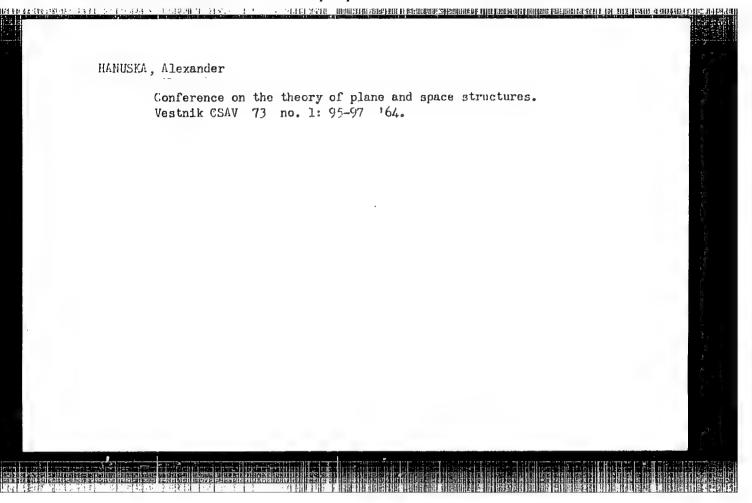
Conference on the theory of plane and space structures. Stav cas 12 no.3:198-199 *64.

1. Institute of Building and Architecture, Slovak Academy of Sciences, Bratislava.

HANUSKA, Alexander, inz. CSc.

Calculation of continuous skew plates. Stav cas 12 no.5:
294-301 '64.

1. Institute of Building and Architecture, Slovak Academy of Sciences, Bratislava.



HANUSKA, L.

"Hydrobiology in people's republics and in the USSR." (p.121). BIOLOGICKY SECRNIK. (Slovenska akademia vied a umeni) Bratislava. Vol. 7, No. 1/2, 1952.

SO: East European Accessions List, Vol 3, No 8, Aug 1954.

HANUSKA, L.

HANUSKA, L. Contemporary problems of the Czechoslovak hydrobiology. p.116.

Vol. 11, no. 2, 1956, BIOLOGIA, BRATISLAVA, CZECHOSLOVAKIA.

SO: Monthly List of East European Accessions, (EEAL), IC, Vol. 5, No. 10, Oct. 1956.

EATTKA, L.

"Some interesting protozoa in the Danube. In German."

p. 53 (Biologia, Wol. 13, no. 1, 1958, Praha, Czechoslovakia)

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, no. 9, September 1958

HAMUSKA, Ladislav

Protozoa in the Nitra river bed (Saprobial-ecological study). Biologia 17 no.11:812-827 '62.

1. Hygienisch-epidemiologische Bezirksstation in Nove Zamky, Arbeitsstatte in Stürovo, Slowakei.

(PROTOZOA) (WATER MICROBIOLOGY)

CZECHOSLOVAKIA

L. HAMUSKA [Affiliation not stated]

"Docent kudolf Sramek-Husek, Dr. Sc."

Bratislava, Biologia, Vol 16, No 2, 1963; p 156.

Abstract: Brief sympathetic obituary of ornithologist - limnologist - hydrobiologist who died in June 1962 at age 55; review of his sicentific and organizational activity.

1/1

SARO,S.; HANUSKOVA,M.

Spark alpha counter. Actar nat Univ Com 9 no.6:39 ? '64.

1. Chair of Muclear Physics of Comenius University, Bratislava, Smeralova 2A (for Sar

tar and the highest of the control o

HANUSKOYA, M.

Problems in anesthesia in maxillofacial injuries. Acta chir. orthop. traum. cech. 29 no.6:543-546 D '62.

1. Klinika plastickej chirurgie Lekarskej fakulty Univerzity Komenskeho v Bratislave, prednosta doc. dr. St. Demjen. (FACIAL INJURIES) (ANESTHESIA)

L 30916-66 ENT(s.)/T NTO SOURCE CODE: CZ/0038/66/000/001/0021/0021

AUTHOR: Saro, Stofan; Hanuskova, Maria

ORG: Department of Nuclear Physics, Faculty of Natural Sciences, Comenius University Bratislava (Katedra jadrovej fyziky PFUK)

TITLE: Scintillation counter of alpha particles

SOURCE: Jaderna energie, no. 1, 1966, 21

TOPIC TAGS: scintillation counter, alpha particle, oscillation

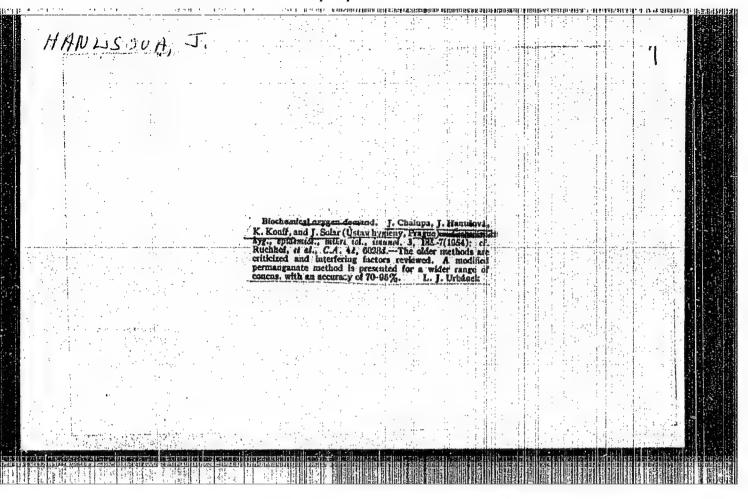
ABSTRACT: The article is an abstract of the authors' publication in Acta F.F.N. Univ. Comen. IX., 1, Physica, 1964. Properties of a counter designed for work in air at atmospheric pressures are discussed. Small differences in the distance of the electrodes from each other do not have a great influence on the accuracy of the counter. When the RH of the air decreased form 100% to 20% the efficiency of the counter decreased by 46%. The anode wire is subject to mechanical oscillation if the wire is too long with respect to its thickness. When the angle of impact of the alpha particles upon the cathode does not exceed 30° the results are not influenced by the angle of impact to a great extent. The efficiency with an increasing angle decreases, and at 90° is practically zero. [JPRS]

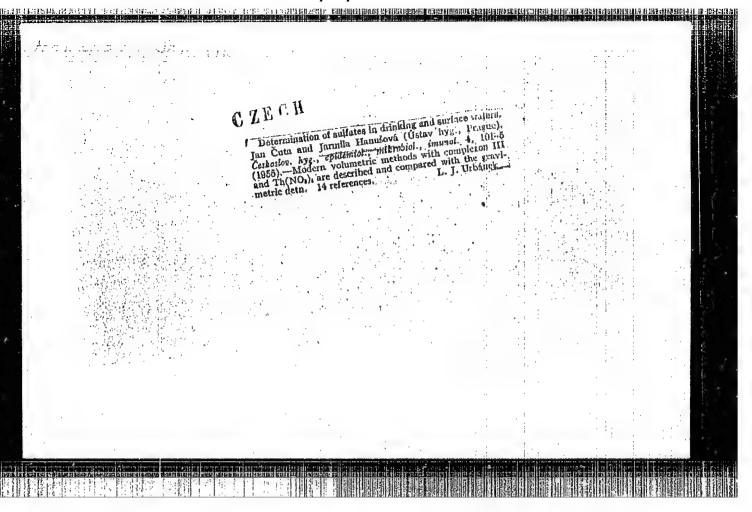
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CZECHOSLOVANIA

HARUSOVA, J; CUTA, J.

Institute of Hygiene (Ustav hygieny), Prague (for both)

Prague, Coskoslovenska hygiena, No 9, 1963, pp. 523-526

"Problems of Detergents in Hygiene. II. Neyhelometric Estimation of Mon-Ionic Saponates by Heans of Iodomercurate."

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LUKAVSKY, J.; HANUSOVA, S.; HORNSTEIN, Q.; WINTER, W.

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Besnier-Boeck-Schaumann disease. Cas. lek. cesk. 96 no.1:
9-12 4 Jan 57.

1. Klinika nemoci vnitrnich Lekarske fakulty hygienicke
Karlovy University. Prednosta prof. Dr. Vratislav Jonas.
(for Lukavsky) 2. Klinika kozni lekarske fakulty hygienicke
Karlovy University. Prednosta doc. Dr. Jan Konopik. (for Hanusova,
Hornstein, Winter).

(SARCOIDOSIS, case reports
pulm. & extrapulm. localization (Cz))
(LUNG DISEASES, case reports
sarcoidosis (Cz))

A LEGIC STORE STREET OF BUILDING STREET STREET, STREET ST

WOLF, J.; HANUSOVA, S.

Occupational eczema with planar appearance. Cesk. derm. 36 no.2:
80-82 '61.

1. Histologicky ustav Karlovy university v Praze, prednosta akad.
prof. Dr. J. Wolf Kozni oddeleni nemocnice v Praze VIII, prednosta
doc. dr. J. Obrtel, dr. Sc.

(OCCUPATIONAL DERMATITIS pathol.) (ECZEMA pathol.)

HANUSOVA, Svetla

Lipoid parakeratotic granules. Cesk. derm. 36 no.7:456-464 '61.

1. Histologicky ustav Karlovy university, prednosta akademik prof. dr. J. Wolf Kozni oddeleni nemocnice Praha-Bulovka, prednosta doc. MUDr. J. Obrtel, Dr. Sc.

(KERATOSIS pathol)

HANUSOVA, V.

Relation of the cerebral cortex to internal organs. Prakt. lek.,
Praha 31 no. 11:237-240 8 June 1951. (CLML 22:3)

1. Of the Third Internal Clinic (Head--Prof. J. Charvat, M. D.

SUCHANOVA, Milada, Dr; UBLOVA, Milada, Dr; HAMUSOVA, Vera, Dr.

Etiology of Reiter's syndrome. Cas.lek.cesk. 91 no.44:1250-1255 31 Oct 52.

1. Za technicke spoluprace M.Loukotove. Z Ustavu pro leksrskou mikrobiologii a imunologii K.U. Prednosta: prof.dr. Fr.Patocka. Z II. kozni kliniky SFN v Praze. Prednosta: prof. K.Hubschmann, Z III. interni klinikh SFN v Praze. Prednosta: prof. dr. J.Charvat. (HEITER'S DISEASE, etiology and pathogenesis)

MICHALOVA, C .: HANUSOVA, V. Considerations on the higher nervous function and on various humoral aspects in workers exposed to trichloroethylene. Cas. lek. cesk. 95 no.42:1167-1172 19 Oct 56. 1. Ustav hygieny prace a chorob z povolani, Praha, red. prof. Dr. J. Teisinger, C. M., Praha 2, Karlovo nam. 33. (TRICHIOROETHYLENE, effects, on blood cholesterol & witamin C & higher nervous funct. in workers (Cz)) (CHOLESTEROL, in blood, eff. of trichloroethylene in workers (Cz)) (VITAMIN C, in blood, same) (CENTRAL NERVOUS SYSTEM, physiology, eff. of trichloroethylene on higher nervous funct. in workers (Cz))

HANUSOVA, V.

CZECHOSLOVAKIA/Fharmacology Toxicology- Toxicology.

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Abs Jour

: Ref Zhur - Biol., No 3, 1958, 13101

Author

Hanusova, V., Michalova, C.

Inst Title : Changes in Higher Nervous Activity and Certain Humoral

Factors due to Contact with Lead.

Orig Pub

: Casop. lekaru ceskych, 1956, 95, No 52, 1409-1412.

Abstract

Higher nervous activity was studied by a method of conditioned reflexes and by blood ascorbic acid and cholesterol levels in typographers with 10 to 30 years of experience and in workers hospitalized because of lead poisoning who had been working with lead for 1 to 10 years. A number of higher nervous activity disorders were found (fatiguability, especially on the part of the second signaling system, weakened inhibitory processes in the first and second signaling systems, increased latent period during the association test). The changes in higher nervous activity

Card 1/2

SIROKY, A.; KREJCOVA, H.; SLAVICEK, J.; HANUSOVA, V.

The irritability threshold of the vestibular apparatus in children and adults. Sborn. lek. 67 no.3:94-100 Mr. 65.

1. Neurologicka klinika fakulty vseobecneho lekarstvi University Karlovy v Praze (prednosta: akademik K. Henner); Fyziologicky ustav fakulty vseobecneho lekarstvi University Karlovy v Praze (prednosta: prof. dr. F. Karasek, DrSc.) a Ustav hygieny prace a chorob z povolani v Praze (prednosta: prof. dr. J. Teissinger, DrSc.).

RADA, B.; BLASKOVIC, D.; technical assistance: HANUSOVSKA, T.

Inhibition of vaccinia virus multiplication in vitro by 6-azauracil

riboside. Acta virol. Engl. Ed. Praha 5 no. 5: 308-316 S '61.

1. Institute of Virology, Czechoslovak Academy of Sciences, Bratislava.

(VACCINIA wirol)
(NUCLEOSIDES AND NUCLEOTIDES pharmacol)

HANUSZ, Andras, fomernok Trends in the manufacture of loading and assembling cranes. Gep 15 no.12:478-482 D '63. 1. Magyar Hajo- es Darugyar Daru Gyaregyseg.

Card 6/6	Canada : Minatava	Mabiatowski, Jerry, Engineer. of Utilisation of Wind Energy	Enhistered of Wind Energy, P.	Characteristic o	Bourt, Ing Cae Power Flant With A description plant in Star published in	Malysa, Stanisla Srus Type Visa M The suthors of to the Patent	Druci, Jadvigs, Mas	Con the basis of the article des	Enbiatovski, Jerzy	Earnes, Pricelly The mythor give specializes who	irrigation, etc	Withlake Princes of the service of t	Loberth, Jerry, Mar Nover Stations The entire deals and new-mountail manil local indu- electric power p.	Withless Pritries Service of the Elec- Pre- enther points water power for a for economic res	correnant: finis coll time for local t coll fine for local time for local time for local times party shid fine source make a concernite white a three end of the	FORFOR: This bulls in the development resources for loc	No editors mentioned	Make energetyka; blu Eraków, Tovarnyst	-	The second second
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AUTHOR:

Hanusz, Tadeusz, Master of Engineering

TITLE:

A device for measuring the speed of experimental rockets by photo-

graphy

PERIODICAL: Skrzydlata polska, no. 21, 1960, 7

The article describes a new method and a device for measuring the speed of the RM-2A experimental rocket. The basic principle of this method is to TEXT: photograph the rocket trail left by a chemical substance, in a mirror vibrated by a contact breaker which is powered by a 4.5 v battery. There is 1 photograph.

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JASINSKA, St.; LINK, F.; BLASKOVIC, D.; RADA, B.; Technical assistance: RAUS, J.; HANUSOVSKA, T.

Studies on the effect of antiviral substances on experimental virus infections. III. The effects of 6-azauracil riboside and urethane on vaccinia virus infection in mice. Acta virol. (Praha)[Eng]6 no.1: 17-23 Ja *62.

1. Institute of Virology, Czechoslovak Academy of Sciences, Bratislava.

(VACCINIA virol) (URETHANE pharmacol) (NUCLEOSIDES AND NUCLEOTIDES pharmacol)

VILCEK, J.; RADA, B.; Technical assistance: TOVARYSOVA, H.; HARUSOVSKA, T.

Studies on an interferon from tick-borne encephalitis virus-infected cells (IF). III. Antiviral action of IF. Acta virol. (Praha)[Eng]6 no.1:9-16 Ja '62.

(ENCEPHALITIS EPIDEMIC virol)

TRZASKOWSKI, Stanisław; KUZMA, Wacław; HANUSZKIEWICZ, Henryk
Right diaphragmatic hernia. Polski przegl. radiol. 20 no.1:
37-40 Jan-Feb 56.

1. Z Zakładu Radiologii A M w Lodzi. Kier. doc. dr. W.
Trzetrzewinski z III Kliniki Chirur. A M w Lodzi. Kier. prof
dr. W. Tomaszewicz 1 z Pracowni Radiolog. Szpitala Miejskiego
dr. W. Tomaszewicz 1 z Pracowni Radiolog. Szpitala Miejskiego
w Kutnie Dyrektor dr. J. Perkowicz. Stanisław Trzaskowski,
Lodz, ul. Xielona 17 m. 5. Wacław Kusma, Lodz, ul. Narutowicza
42. Henryk Hanuszkiewicz, Lodz, ul. Kopcinskiego 22.
(HERNIA, DIAPHRAGMATIC, case reports.

(Pol))

HANUSZKIRMICZ, Henryk; TORZECKI, Zenon

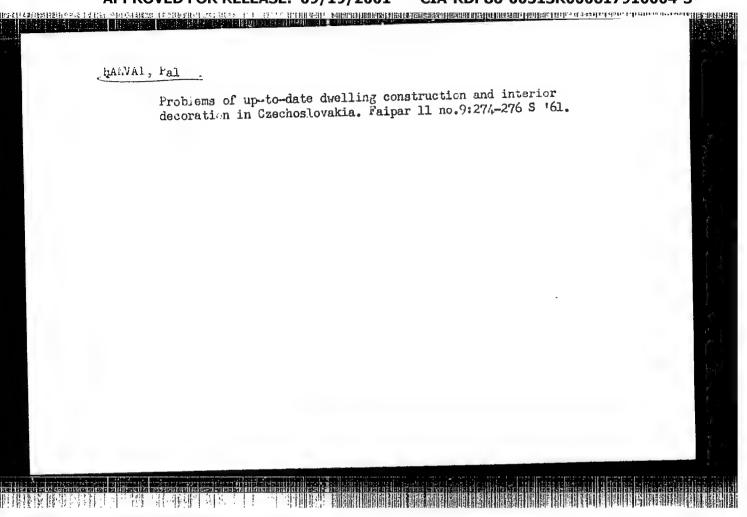
Postoperative histopathological lesions of adrenal glands in thromboangittis obliterans. Polskie erch.med. wewn. 28 no.5:706-710 1958.

1. Z III Kliniki Chirurgicznej A.M. w Lodzi Kierownik: prof. dr med. W. Tomaszewicz i z Zakladu Anatomii Patologicznej A.M. w Lodzi Kierownik: prof. dr med. A. Pruszczynski. Adres autora: Lodz, ul. Prochnika 9.

(THROBOANGIITIS OBLITERANS, surgery, adrenalectomy, postop, residula adrenal histopathol. (Pol))

(ADRENAL GLANDS, histopathol. in thromboangiitis obliterans (Pol))

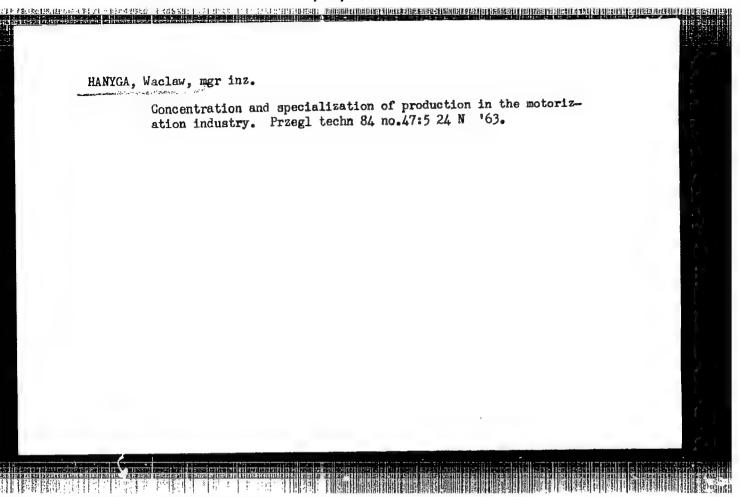
(ADRENALECTOMY, in war dis. thromboangiitis obliterans, postop. residual adrenal sitopathol. (Pol))

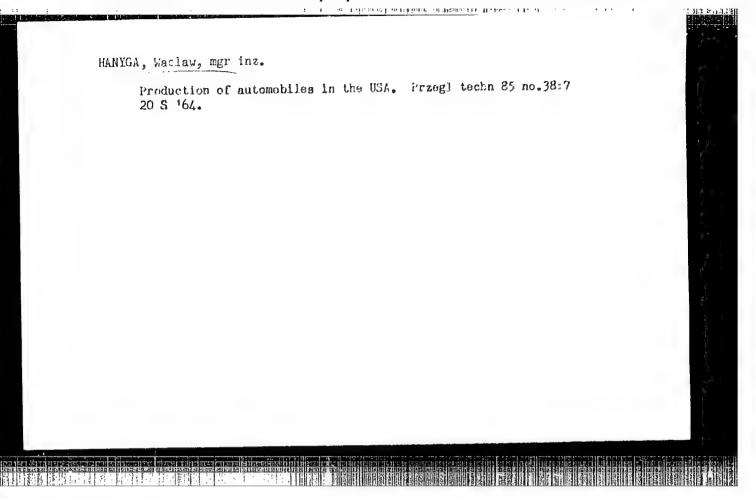


HANYGA, Waclaw, mgr inz.

Development prospects of the automobile industry in Poland.
Techn motor 13 no. 7: 209-216 Jl '63.

1. Stowarzyszenie Inzynierow i Technikow Mechanikow Polskich,
Warszawa.





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HANYK, J.

"Electrification of the Czechoslovak State Railroads and the New Electric Locomotive Bo'Bo'." p. 178 (STROJIRENSTVI, Vol. 3, No. 3, March 1953, Praha, Czechoslovakia).

SO: Monthly List of East European Accessions, IC, Vol. 3, No. 5, May 1954, Unclassified

HANYK, J.

"The Flectrification of Railroads as a New Epoch in the History of Czechoslovak Railroads." p. 203

"The Heroic Fight of Korean Railroad Men." p. 206 (Zeleznice, Vol. 3, no. 9, 1953, Praha)

S0: Monthly List of East European Vol. 3, No. 3

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HANYK, J.; JANSA, F.

Electrification of the Czechoslovak railways. p. 452.

ELEKTROTECHNICKY OBZOR. Praha, Czechoslovakia, Vol. 44, No. 9, Sept. 1955.

Monthly list of East European Accessions, (EEAI) LC, Vol. 8, No. 10, Oct. 1959.
Uncl.

HAMYK, J.; JAASA, F.

Electric locomotives. p. 508.

Vol. 44, no. 10, Oct. 1955 ELEKTROTECHNICKY OLZOR Praha, Czechoslovakia

Source: East European Accession List. Library of Congress Vol. 5, No. 8, August 1956

HAMYE, J.

A comparison of the electrification cost of railroads in using 25-kv., 50-cycle alternating current and 3000-volt direct current.

p. 54 (Zeleznicni Technika. Vol. 5, nr. 2, Feb. 1957. Fraha, Gzechoslovakia)

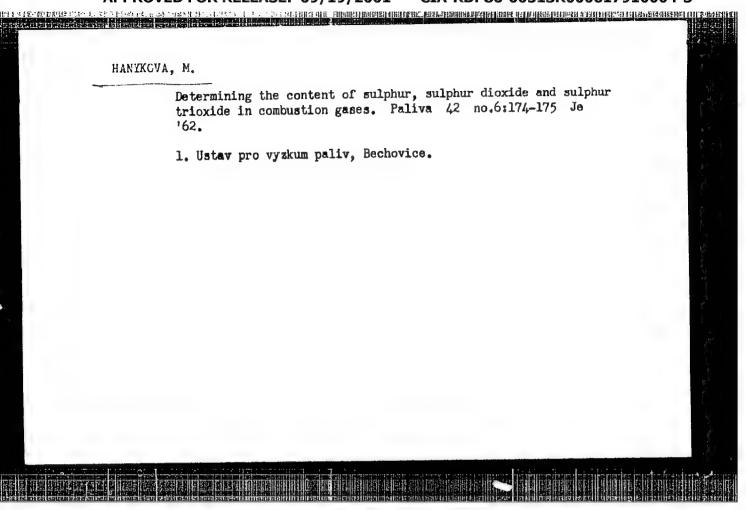
Monthly Index of East European Accestions (EEAI) IC. Vol. 7, no. 2, February 1958

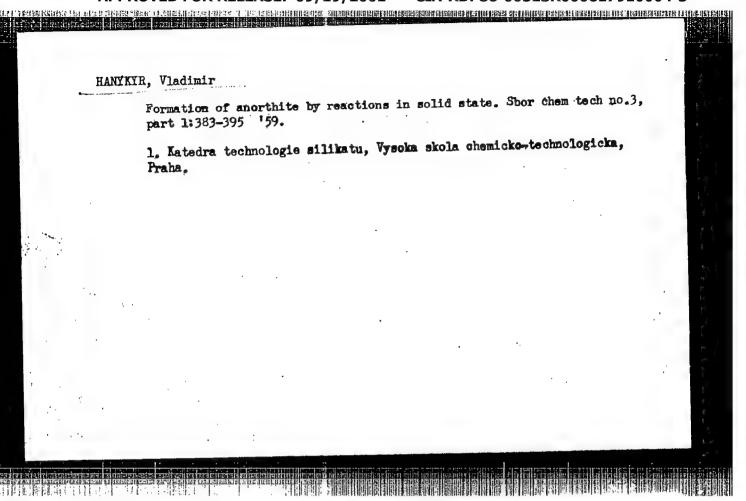
HANYK, J.

Electric traction on F ench railroads.

P. 97, (Zeleznicni Technika) Vol. 5, No. 4, Apr. 1957, Czechoslovakia

SO: MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (EEAI) LC. - VOL. 7, NO. 1, JAN. 1958

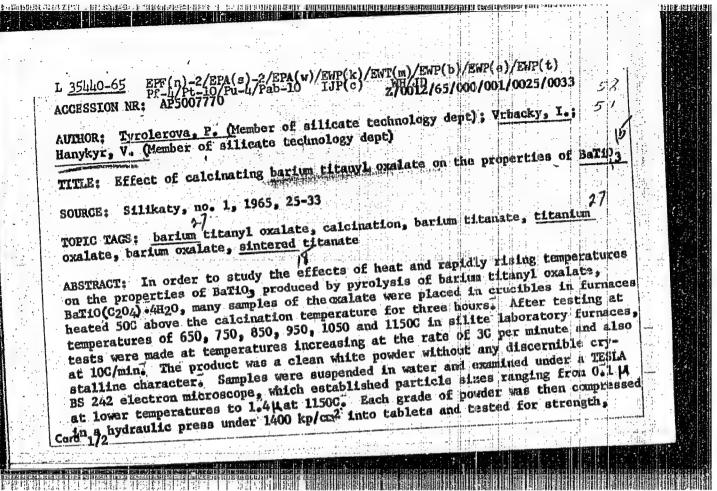


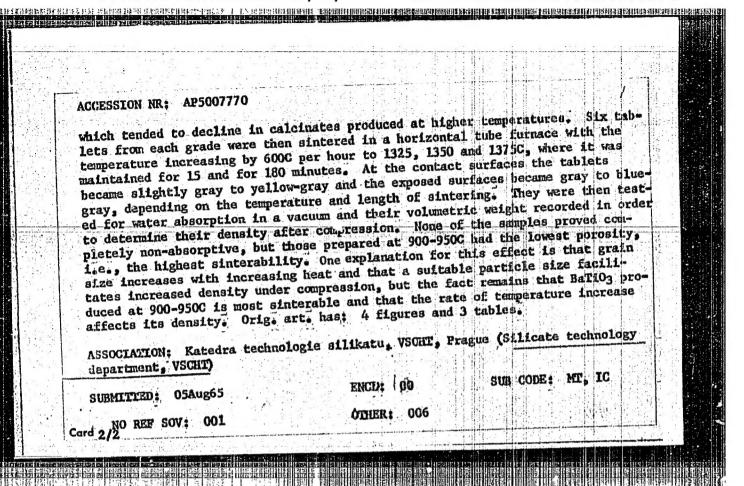


MATVEJEV, German Michajlovic; HANYKYR, Vladimir

Approximate determination of thermodynamic properties of some compounds of CaO - Al₂O₃ - SiO₂ system and the thermodynamic analysis of their origin. Shor chem tech no.3, part 1:397-404 159.

1. Katedra technologie silikatu, Vysoka skola chemicko-technologicka, Fraha.





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E112/E435

9,4300 (1145.00 **AUTHORS:**

František and Hanykfr, Vladimír

TITLE:

New ceramics with a low loss and low coefficient of

thermal expansion

PERIODICAL: Silikaty, 1961, No.3, pp.220-227

Ceramics, based on kaolinite and the carbonates of the alkaline earth metals, are becoming increasingly important insulating materials for operation under conditions of rapidly changing thermal stresses. The best known products are based on anorthite (CaO.Al203.2SiO2), celsian (BaO.Al203.2SiO2) and the alkali-free porcelains, containing alkaline earth carbonates as fluxes. The materials show generally good dielectric properties, plasticity and excellent resistance to temperature changes. Firing characteristics are, however, not completely satisfactory owing to the relatively narrow range of sintering temperatures. Sintering characteristics can be improved by replacing part of the calcium in anorthite by barium or strontium carbonate. the latest developments is an anorthite material of the following composition: 65% kaolinite, 23% CaCO3, 2% wollastonite and Card 1/6

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New ceramics ...

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10% CaZrSiO₅. A satisfactory celsian material has been previously prepared in Czechoslovakia but the preparation of anorthites has not yet been attempted. This gap has now been filled and the present paper describes the production not only of anorthite but also of celsian and mixtures of both components with the view of improving firing characteristics. The following procedure was adopted for the production of the synthetic materials: part of the required CaCO₃ or BaCO₃ was calcined in equimolar proportions with kaolinite so as to ensure formation of the desired minerals. The course of the reaction was followed by titration; the preformed minerals were then introduced into the rest of the mass, which was calcined at 1320°C for two hours. Composition of raw materials:

Anorthite mass		Celsian mass						
Anorthite precalcinate CaCO ₃ Kaolin + clay Zirconium	25% 23% 37% 15%	Celsian precalcinate BaBO ₃ Kaolin + clay Zirconium	25% 30% 30% 15%					
Card 2/6								

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New ceramics ...

The different masses were studied by differential thermal analysis, Differential-thermal curves are reproduced in Fig.1. suitable firing temperature was determined on cylindrical test specimens by heating them in an electric oven and measuring the The sintering range is interaction of temperature and shrinkage. defined as temperature range within which the shrinkage of the sample remains constant. The following other physical constants were determined: 1. specific gravity; 2. compressive strength; 3. bending strength; 4. coefficient of thermal expansion; 5. tan 8 at 1 Mc/s, 20°C; 6. dielectric constant at 1 Mc/s; 7. thermal capacitance coefficient at 10 Mc/s, 20 - 80°C; 8, resistance at 50 cps at 20°C; 9. electric strength at 50 cps. Best results were obtained with a mixed material, consisting of This material 30% of the anorthite and 70% of the celsian mass. proved superior in its electric and mechanical properties to the pure celsian mass. In addition, it has a considerably lower firing temperature and a sufficiently wide sintering range. Its properties are: compression strength = 4700 kg/cm²; bending strength, 660 kg/cm 2 ; thermal expansion coefficient = 3.0 (20 to Card 3/6